

REMARKS

Claims 1 and 3-25 are pending in this application. Claims 1 and 3-25 have been rejected. No new matter has been added. It is respectfully submitted that the pending claims define allowable subject matter.

Claims 1, 3-6, 8-13 and 15-24 have been rejected under 35 U.S.C. § 102(b) as being obvious over Wood et al. (U.S. Patent 5,715,823) in view of any of Miller et al. (U.S. Patent 6,213,944), Ali et al. (U.S. Patent 6,501,818) or Kerby et al. (U.S. Patent 6,716,172). Applicants respectfully traverse this rejection. As an initial matter, Applicants note that the rejection is based on Section 102, but the Office Action is combining references. Accordingly, Applicants are responding to this rejection as a Section 103 rejection.

Wood et al. describes a medical ultrasonic diagnostic imaging system that is capable of being accessed over data communication networks such as the Internet (abstract). The system allows a physician to remotely control and perform diagnosis using an ultrasound system over a network such as the World Wide Web (abstract). In response to external requests an HTTP server 30 transmits HyperText Markup Language (HTML) pages 34 to an inquiring Web browser. HTML pages describe what the Web browser will display on the screen at the remote terminal, including buttons, text, images, animated real time loops of images, sounds, and so forth. HTML pages may be directly encoded in software by following the instructions published in a number of reference texts such as HTML and CGI Unleashed (column 8, lines 10-18).

The ultrasound system includes a number of small executable programs called Common Gateway Interface (CGI) programs. The CGI programs provide an interface between the HTML pages and the hardware and software of the ultrasound system. The CGI programs communicate with the ultrasound system, asking the system to perform actions or provide requested information such as images, reports, or current status. In a constructed embodiment the CGI programs respond to external requests for information by dynamically creating custom HTML pages in which the requested information is embedded (column 8, lines 40-51). In operation the CGI programs access ultrasound images and reports which are stored at 24, access and execute diagnostic routines stored at 28, and interact with the controls of the ultrasound system through the ultrasound system controller 18 (column 8, lines 61-65).

The specially modified ultrasound system can be accessed by a standard Internet compatible personal computer terminal. The personal computer central processing unit (CPU) executes the PC's software in response to actions on the keyboard 110 and mouse and displays ultrasound data and images on the screen of the monitor 108. The CPU executes the Web browser software 104 to access the Internet through TCP/IP and PPP protocols 146 and 148 configured for the personal computer. Connection to a network is through the PC's serial port 131 and a modem 132 (column 9, lines 11-21). A patient directory Web page contains two small ultrasound images 212 and 214 which were obtained from the ultrasound system's image store 24a. The remote terminal user may click on either of these small images to see a full size rendering of the image with its original image quality, or play the real time image sequence represented by the small image. The remote terminal makes an election of these options by clicking on the "Image" or "Cineloop" options above the small images (column 9, lines 57-65).

Miller et al. describes an ultrasonic diagnostic imaging system with a digital video recorder that can store recorded data on nonvolatile digital storage media, including a hard disk 210, a magneto-optical disk 212, a CD-RW disk 214 or a digital disk 216 (column 3, lines 26-39).

Ali et al. describes a computed tomography system that allows viewing on a user interface screen of a diagnostic system data configured as pages defined, for example, by a markup language or a programming language such as Java, perl, java script, etc. (column 13, lines 50-57).

Kerby et al. describes a medical diagnostic ultrasound imaging system providing for storage of an ultrasound image in a hard disk 180 that also can be transferred to a workstation 300 via external storage media 200 or a network 210. The ultrasound image is stored in a post-scan-converted format, such as a standard pixel format, for viewing on different hardware (column 4, lines 6-13).

Claim 1, as amended, recites a method for providing ultrasound data for access with a user device comprising "storing the user device readable format data on a removable medium within the ultrasound system, the removable medium configured to be accessed by the user device and including an embedded viewer configured to allow viewing of the user device readable format data." The combination of Wood et al. with any of Miller et al., Ali et al. or

Kerby et al. does not describe or suggest such a method. The combination of these references fails to describe a method wherein the removable medium on which the data is stored also includes an embedded view. The prior art references require a separate viewer or user interface. Accordingly, the combination of Wood et al. with any of Miller et al., Ali et al. or Kerby et al. does not describe or suggest a method as recited in claim 1.

Claims 3-6 and 8-9 each depend from independent claim 1. When the recitations of claims 3-6 and 8-9 are considered in combination with the recitations of claim 1, Applicants submit that dependent claims 3-6 and 8-9 are likewise patentable over Wood et al. in combination with any of Miller et al., Ali et al. or Kerby et al. for at least the same reasons set forth above.

Claim 10, as amended, recites a method for exporting data from an ultrasound system for access with a user device comprising “providing an embedded viewer on the removable external medium, the embedded viewer configured to allow viewing of the non-DICOM formatted image.” As discussed above, the combination of Wood et al. with any of Miller et al., Ali et al. or Kerby et al. simply does not describe or suggest a method providing an embedded viewer. Accordingly, the combination of Wood et al. with any of Miller et al., Ali et al. or Kerby et al. does not describe or suggest a method as recited in claim 10.

Claims 11-13, 15-17 and 25 each depend from independent claim 10. When the recitations of claims 11-13, 15-17 and 25 are considered in combination with the recitations of claim 10, Applicants submit that dependent claims 11-13, 15-17 and 25 are likewise patentable over Wood et al. in combination with any of Miller et al., Ali et al. or Kerby et al. for at least the same reasons set forth above.

Claim 18, as amended, recites a user interface for an ultrasound system comprising “a scanner image control portion for controlling the conversion and transfer of the ultrasound data to the external medium, the external medium including an embedded viewer configured to allow viewing of the ultrasound data.” As discussed above, the combination of Wood et al. with any of Miller et al., Ali et al. or Kerby et al. simply does not describe or suggest a user interface configured to transfer data to an external medium having an embedded viewer. Accordingly, the combination of Wood et al. with any of Miller et al., Ali et al. or Kerby et al. does not describe or suggest a method as recited in claim 18.

Claims 19-22 each depend from independent claim 18. When the recitations of claims 19-22 are considered in combination with the recitations of claim 18, Applicants submit that dependent claims 19-22 are likewise patentable over Wood et al. in combination with any of Miller et al., Ali et al. or Kerby et al. for at least the same reasons set forth above.

Claim 23, as amended, recites a medium for accessing ultrasound data stored therein comprising “an interface provided as part of an embedded viewer configured to automatically display on the user device the at least one ultrasound image when accessed by a reading device of the user device having the medium therein.” As discussed above, the combination of Wood et al. with any of Miller et al., Ali et al. or Kerby et al. simply does not describe or suggest a user interface provided as part of an embedded viewer. Accordingly, the combination of Wood et al. with any of Miller et al., Ali et al. or Kerby et al. does not describe or suggest a method as recited in claim 23.

Claim 24 depends from independent claim 23. When the recitations of claim 24 are considered in combination with the recitations of claim 23, Applicants submit that dependent claim 24 is likewise patentable over Wood et al. in combination with any of Miller et al., Ali et al. or Kerby et al. for at least the same reasons set forth above.

For at least the reasons set forth above, Applicants respectfully request that the 35 U.S.C. § 103 rejection of claims 1, 3-6, 8-13 and 15-24 be withdrawn.

Claim 7 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood et al. in view of the secondary references as applied to claim 1 and further in view of Haskin (U.S. Patent 5,724,101). Applicants respectfully traverse the 35 U.S.C. § 103(a) rejection.

Haskin describes a system for conversion of non-standard video signals to standard video signals that allows for transmitting the reformatted image information to a physician's terminal (abstract). Data from a diagnostic apparatus, and more particularly, analog image data is converted to a standard format using video converters (column 4, lines 1-34). Even from a cursory reading of the Haskin reference, Haskin fails to make up for the deficiencies of the Wood et al. reference. In particular, Haskin describes converting video data and transferring the converted video data (e.g., converted to a different display format of a terminal) to a remote terminal having a viewer thereon. In contrast, the method of claim 1 recites storing the user device readable format data on a removable medium within the ultrasound system with the removable medium configured to be accessed by the user device

and including an embedded viewer configured to allow viewing of the user device readable format data. Accordingly, when the recitations of claim 7 are considered in combination with the recitations of claim 1, Applicants submit that dependent claim 7 is likewise patentable over the cited art for at least the same reasons set forth above.

Claim 9 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood et al. in view of the secondary references as applied to claim 1 and further in view of Killcommons et al. (U.S. Patent 6,424,996). Applicants respectfully traverse the 35 U.S.C. § 103(a) rejection.

Killcommons et al. describes a medical network system that assembles and communicates multimedia information from a variety of modalities to remote users using a browser enhancement module (abstract). Killcommons et al. describes that medical information transfer may be provided using the Internet to allow access from remote locations (column 1, lines 41-43) and that the data may be communicated in compressed format, such as, using JPEG, GIF and bitmap schemes (column 2, lines 60-63). Even from a cursory reading of the Killcommons et al. reference, Killcommons et al. fails to make up for the deficiencies of the Wood et al. reference. In particular, Killcommons et al. describes converting data to a compressed format to increase transfer times using Web-based transfer systems to systems having viewers. In contrast, the method of claim 1 recites storing the user device readable format data on a removable medium within the ultrasound system with the removable medium configured to be accessed by the user device and including an embedded viewer configured to allow viewing of the user device readable format data. Accordingly, when the recitations of claim 9 are considered in combination with the recitations of claim 1, Applicants submit that dependent claim 9 is likewise patentable over the cited art for at least the same reasons set forth above.

Claim 14 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood et al. in view of the secondary references as applied to claim 13 and further in view of Johnson et al. (U.S. Patent U.S. Patent 6,351,547). Applicants respectfully traverse the 35 U.S.C. § 103(a) rejection.

Johnson et al. describes a method and apparatus for formatting digital images such that properly formatted image files may be sent to multiple remotely located devices via a network (abstract). An imager is programmed with one or more DICOM tasks to convert an

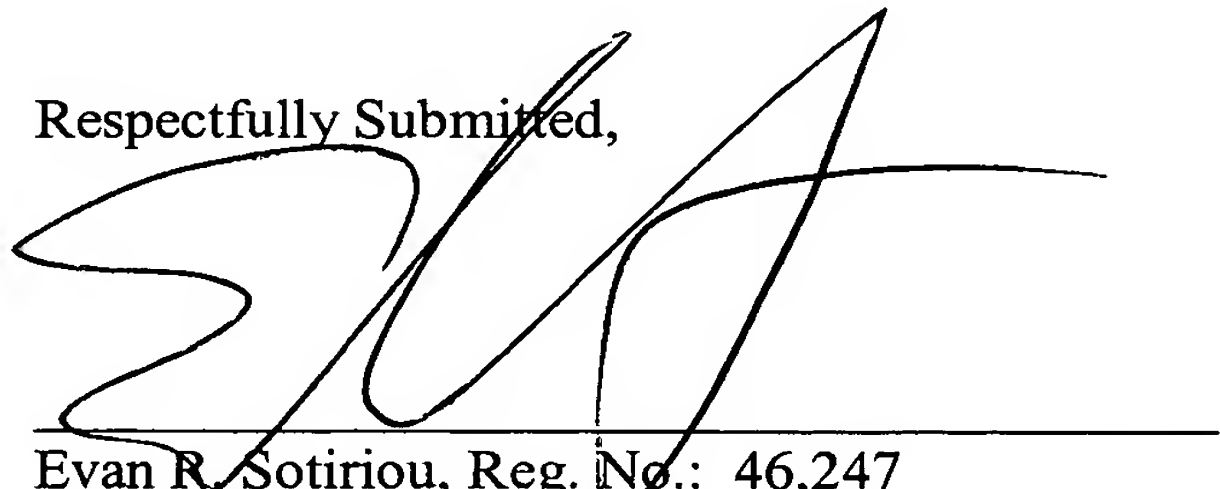
image file, comprising image frame data and attribute data, into a DICOM-formatted object, also comprising image frame and attribute data. The DICOM object conforms to the DICOM standards as well as the attribute requirements of the remote device that is to receive the DICOM object (column 11, lines 48-54) and having a viewer. Each activated configured remote device has an Attribute Control File associated therewith and includes a mapping of which attributes should be associated with every image sent to the remote device associated with that Attribute Control File (column 12, lines 9-14). The DICOM task 40 sends a DICOM object in proper format to a corresponding destination remote device via a network manager 42 and a port 44.

In contrast, the method of claim 10 recites providing an embedded viewer on the removable external medium, the embedded viewer configured to allow viewing of the non-DICOM formatted image. Accordingly, when the recitations of claim 14 are considered in combination with the recitations of claim 10, Applicants submit that dependent claim 14 is likewise patentable over the cited art for at least the same reasons set forth above.

For at least the reasons set forth above, Applicants respectfully request that the 35 U.S.C. § 103 rejection of claims 7, 9 and 14 be withdrawn.

In view of the foregoing amendments and remarks, it is respectfully submitted that the prior art fails to teach or suggest the claimed invention and all of the pending claims in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the telephone number listed below.

Respectfully Submitted,



Evan R. Sotiriou, Reg. No.: 46,247
ARMSTRONG TEASDALE LLP
One Metropolitan Square, Suite 2600
St. Louis, Missouri 63102-2740
(314) 621-5070